

Assembly & Operating Instructions

READ CAREFULLY! IMPORTANT!

Congratulations on the purchase of your new product. To ensure that your new product consistently performs in the manner in which it was designed, and to avoid unnecessary assembly complications, use the assembly tips below to guide you through the assembly process.

Read all assembly and operating instructions carefully before proceeding!

We highly recommend reading this entire document before unpacking and attempting to assemble your new cycle. If you feel you are not capable or comfortable conducting the assembly, please call us at 409.986.2006 so that we can assist in finding a bicycle shop for you to hire to conduct the assembly.

Recommended Tools:

- 10 inch crescent wrench
- 8 or 6 inch crescent wrench
- 10mm socket
- 13 mm socket
- 14 mm socket
- Socket wrench
- 10 mm box end wrench
- 13 mm box end wrench
- 14 mm box end wrench
- 15 mm box end wrench
- 17 mm box end wrench
- 22 mm box end wrench
- Box cutter knife or scissors
- Weighted plastic or rubber mallet
- Awl or small Philips head screw driver (to line up holes)
- Needle-nose Pliers
- 4 mm allen wrench

Please note, these are only recommended tools. For example, socket wrenches are not required, but they do make the job a little easier and faster.

Read all assembly and operating instructions carefully before proceeding!

Steps:

1. Completely unpack and unwrap all components. During the assembly process, leave all nuts "finger tight" until the end of assembly.
2. Install the front wheels by sliding the tapered axle end into the silver front wheel bushing. Tighten the wheel from the inside by using a wrench on the flat areas of the axle closest to the hub. So not use the phillips or allen head bolt on the outside of the wheel to tighten or loose the wheel. Repeat the process on the opposite side.
3. Install the rear wheels by centering the wheel in the middle of the frame with the freewheel sprocket on the right side on the driver side and on the left side on the passenger side. Check your rear wheels. One will engage when you spin the freewheel clockwise. Put that one on the driver side of the unit. The wheel with the freewheel that engages turning counter-clockwise is the passenger side wheel.

The rear wheels should be inserted into the frame rear stays (fork shaped frame area) and by sliding the brake plate past the bolt welded to the frame as shown in the photo.

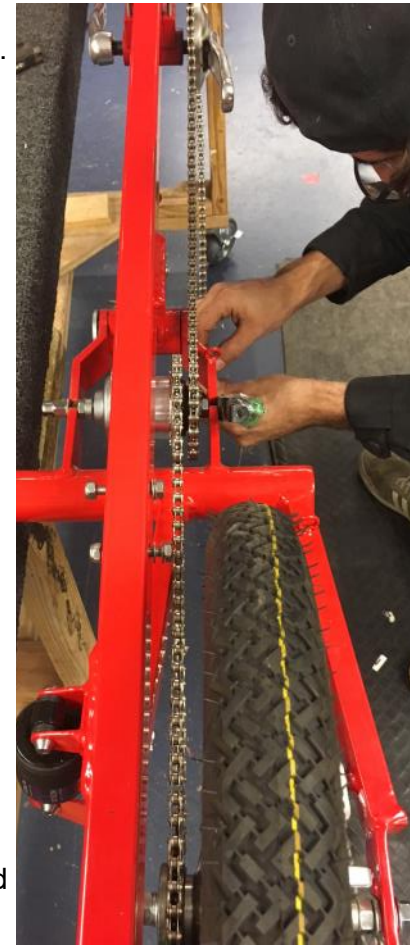
4. Attach the two chainguards to the baseframe.
5. Install the crank sets by bolting them to the baseframe with the sprockets inline with the 3 speed sprocket. Attach both the front and rear chains by using the master link. Slide the crankset forward to tighten the chain and tighten the bolts so that the chainrings remain under the protection of the chainguards. While pulling back on the wheel, tighten each axle nut by taking alternating 1/2 turns. Make sure the wheel is centered and tightened evenly.



Steps:

6. Each rear wheel and both chains should be in straight alignment as the picture on the right shows. Repeat the process on the other side.

7. With all four wheels installed, next install the rear diagonal member with the serrated track facing forward for the installation of the seats. This member attaches to the base frame with four bolts (2 on each side of the base frame).



8. Repeat the process with the front diagonal member, which has the passenger handlebar and steering wheel bracket welded to it.



Steps:

9. Examine both black universal joints (u-joints) attached to the **Steering Column**. Attach the u-joint with the *single bolt* to the **Rack and Pinion Steering unit** under the front of the **Base Frame**. Notice both the u-joint and the rack and pinion mount is serrated inside the hole. Tighten the bolt to secure the u-joint. Slide one of the black rubber boots over the top of the u-joint after it is securely tightened to the rack and pinion.



Next, after removing the two bolts from the (top) u-joint, slide the u-joint over the Steering Wheel Yoke while pushing the steering column down on to the bottom u-joint. The (top) u-joint has two bolts and attaches to the **Steering Wheel Yoke** under the Handle Bar. The larger bolt pass by the flat area of the Steering Wheel Yoke and tightens securely. The smaller bolt is tightened into the side of the Steering Wheel Yoke to eliminate any movement between the two. Finally, 4 set screws are tightened with a 4 mm allen wrench and the 4 lock nuts are tightened with a 13 mm wrench.

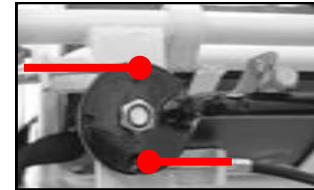
10. On the top side of the steering wheel yoke, use the allen head bolts to attach the wheel to the silver yoke.
11. Install the two tubular front seat braces from the handle bar to the front of the baseframe.
12. Next, install the front seat by bolting the seat to the tubular supports on each side of the seat.



Steps:

13. Install the Pedals. Each pedal has an “L” or “R” on the end of each axle. The L pedal mounts to the arm without the chainring (left side of the crank). The R pedal mounts to the arm with the chainring. Also be careful to not cross thread the pedals by screwing them into the cranks arms at an angle.
14. Elevate the rear of the cycle by placing it on a bucket or stand. Install the Brake Cables by starting at the rear of the cycle and sliding the Brake Cable with the black housing along the Base Frame. The end of the Brake Cable with the Barrel, Nut and Rubber Housing stays at the rear of the cycle. The ball on the end of the Cable should be fed through the guide under the Steering Wheel and into the holes in the disk on the Brake Handle at the 12 and 6 o'clock positions. Remove the nut on each cable. Slide the Barrel with the hole in it through the chrome Brake Arm on the Rear Hub.

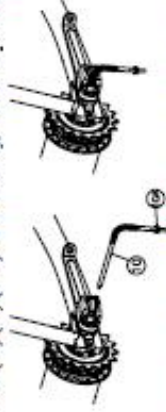
Slide the threaded cable end through the hole in the Barrel. Tighten the nut on the Cable end against the Barrel for proper brake adjustment. Make sure the wheel spins freely when the Brake is not engaged. After both cables are installed pull the black Brake Arm on the Handle Bar. While the brake is engaged have another person attempt to spin the rear wheels. Properly adjust each brake cable so that each wheel has equal brake tension on the rear wheels. With the parking brake engaged, the wheels should not turn at all.
15. Install the Awning Posts Assembly by stabbing the posts into the front mounts on the front diagonal member. Tap with a plastic or rubber mallet until enough of the post appears in the thread hole (into which the allen keepers screw) so that the allen set screw can tighten. Repeat the process on the rear diagonal member.
16. Install Awning Frame with 13 mm nuts. The frame should be installed with the end of the frame with the mounting holes closest to the perimeter of the frame (measuring front the back) installed in the back on the cycle. Put on cloth Awning. Secure with the Velcro ties.
17. Install the main seats by placing the seats against the serrated area of the rear diagonal member and tighten the quick release handle and fold down.
18. Using a socket wrench, tighten all hand tight or loose nuts, both 13 mm and 14 mm. *Refrain from over-tightening the bolts, which may cause stripping of the threads or bolt breakage.*
19. Properly adjust both 3 speed hubs by following the published instructions from Sturmey Archer (included at the end of this document).
20. Properly inflate all tires to the tire pressure required on the sides of the tires, no more than 40lbs.



Instructions: 3-speed Internal Gear Hubs

1. GENERAL INFORMATION

indicator cover (21)(22)(22A) on if necessary, but not snap at this point.



9. Ensure components are fitted to the right side of axle. Unscrew the indicator by up to half a turn if necessary to ensure easy firmness over the guide unit. Connect the indicator (10) to the cable connector (19).

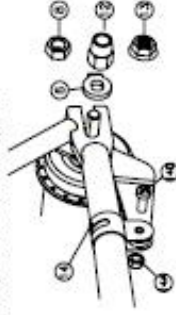


2.2 AW, S-RF3, AWB, S-RB3

See section 2.1. Step 5 does not apply.

2.3 AWC(II), S-RC3(II)

See section 2.1. Step 5 is shown as diagram.



3. GEAR ADJUSTMENT

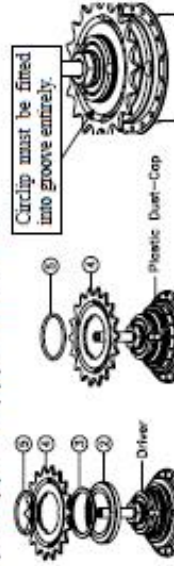
1. Move the indicator cover (21)(22) for easy gear adjustment.
2. Make sure that no more than 2.5mm of axle protrudes from the axle hex nut.
3. Select 2nd gear and turn the pedal crank forward to ensure the gear is engaged. Turn the cable adjuster (20) or cable connector (19) until the end of the indicator rod is level with the end of the axle, as show in diagram.
4. Tighten the cable-adjusting locknut (20-A) and indicator locknut (10-A) to lock in adjustment.
5. Select 3rd gear position, rotate the pedal crank, change back to 2nd gear and check adjustment. Rerun the stages description above when the gear changing is not correct.
6. If there is an indicator cover (21)(22)(22A), fit it firmly onto the guide nut (16) or the guide pulley set (9).

2. INSTALLATION

2.1 AB3, SAB3, X-RD3, XL-RD3

1. Build hub into complete wheel set.

2. Fit the dust-cup (2) - spacer (3) - sprocket (4) - circlip (5) onto the driver. For hubs already pre-fitted with a plastic dust-cap with built-in spacer, simply fit sprocket (4) and circlip (5) onto the hub driver.



3. Put the hub axle into the rear fork end and place the chain around the sprocket (4).

4. Fit the lock-washer (6) - dome nut (12) or hex nut (8) or flange nut (13) on the right side of the axle. Screw the nut finger tight.

5. Fit brake arm into brake arm clip (14) with nut (14A) and bolt (14B). Do not tighten at this point.



6. Locate the lock-washer (6) - fulcrum lever (7)(15) and guide nut (16) or hex nut (8) and guide pulley set (9). Do not tighten nuts at this point. Align the wheel, tension the chain and ensure the fulcrum lever (7)(15) is parallel with the chainstay.



7. Tighten both axle nuts to 28Nm and the brake arm clip (14) nut to 7Nm.
8. Fit the indicator rod (10) into the axle and screw it finger tight. Put the



Δ The brake adjustment should be checked or replaced if necessary before first using the bicycle and after removing or replacing the wheel.

Notice: During the first few miles brake linings "bed-in" and may require re-adjustment. Should braking efficiency become impaired beyond adjustment, the brake may need replacement. Contact your SturmeY-Archer dealer who is equipped to replace these.

4.2 AW, S-RF3, AWB, S-RB3

Check and adjust according to brake manufacturers manual.

4. BRAKE ADJUSTMENT

1. Fit the brake cable adjuster bolt (23) into brake arm. Depress the brake lever and then put the brake cable nipple (24) into the brake lever.
2. Slacken the brake adjuster locknut (25).
3. Turn the adjuster (26) counter-clockwise until the brake is applied.
4. Rotate the adjuster (26) clockwise (about four revolutions) until the wheel just spins freely.
5. Tighten the locknut (25).

Caution -

Please Read Carefully!

Operating Manual

Operating Manual

Safety First

SURREY

- *Always think safety first!* Operate the Surrey at a safe speed with the driver being mindful of road hazards, other cyclist and approaching automobiles.
- Comply with all bicycle safety standards for operations in your city and state.
- We recommend a licensed driver always be in control of the steering wheel and brake arm.
- We recommend all riders wear a helmet, especially children.
- Obey all traffic laws!
- Be visible; wear brightly colored clothing and a helmet!
- Be predictable and be alert!
- Expect the unexpected and ride defensively!
- Use good, safe equipment! Always check your tire pressure, brake operation and chains before going out on your Surrey.
- Use your Surrey only as recommended! Do not make quick turns, travel at unsafe speeds or collide with other objects.
- Adjust riding to traffic and weather conditions!
- Do not stunt drive! Do not ride on fewer wheels than are on the cycle.
- Be especially cautious with downhill braking. With very steep downgrades, it may be impossible to stop your Surrey in a necessary distance although the braking system meets the highest standards. To avoid possible injury, dismount and walk your Surrey (use the brakes) to the bottom of the grade, if you do not feel secure enough, especially on wet, muddy or gravel roads.
- Use common sense. Avoid heavy motor traffic. Do not weave in and out of moving or stationary automobiles.
- Do not operate the Surrey at night without operable head lights and tail lights switched to the on position and operating.
- Avoid colliding with other Surreys, bike riders and other objects in your path.

SURREY

SAFETY!

- Always be sure, too, that all passengers keep their feet on the pedals at all times when traveling in a forward direction . It is dangerous to remove feet from the pedals during riding. Keep feet, legs, arms and hands away from moving wheels, cranks and chains. *If you need to back up (travel in reverse), everyone on the bench seats should dismount from the Surrey and push it backwards.*
- All passengers should remain seated at all times during the ride and children in the front child seat should remain seated and snugly fastened in behind the safety strap.
- Always use oral commands to alert other in your path of your presence and your intention.
- Closely observe all warning signs and decals on the Surrey bike.
- Only persons tall enough to maintain balance on the seat while pedaling should pedal the Surrey.
- Never hitch a ride from another Surrey or an automobile.
- Use approved hand signals for turning and stopping.
- Operating with improperly adjusted brakes or worn brakes may result in serious injury or death.
- Never ride with headphones. They mask traffic sounds, sirens and may prevent you from concentrating on road hazards.
- Never ride your Surrey while under the influence of alcohol or drugs.
- Never carry anything on the Surrey that obstructs your clear view of the path or roadway ahead.
- Ride on familiar routes while wearing light colored, reflective clothing.
- Do not alter the design of the Surrey or motorize it without manufacturer help.



Failure to follow safety procedures may result in serious harm or death!

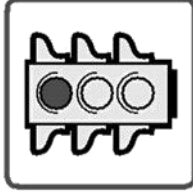
III.

SAFETY!

RIDING SAFETY

General Rules

- When riding obey the same road laws as all other road vehicles, including giving way to pedestrians, and stopping at red lights and stop signs. For further information, contact the Road Traffic Authority in your State.
- Ride predictably and in a straight line. Never ride against traffic.
- Use correct hand signals to indicate turning or stopping.
- Ride defensively. To other road users, you may be hard to see.
- Concentrate on the path ahead. Avoid pot holes, gravel, wet road markings, oil, curbs, speed bumps, drain grates and other obstacles.
- Cross train tracks at a 90 degree angle or walk your Surrey across.
- Expect the unexpected such as opening car doors or cars backing out of concealed driveways.
- Be extra careful at intersections and when preparing to pass other vehicles.
- Familiarize yourself with all the Surrey's features. Practice gear shifts, braking, and the use of toe clips and straps, if installed.
- If you are wearing loose pants, use leg clips or elastic bands to prevent them from being caught in the chain.
- Wear proper riding attire and avoid open toe shoes.
- Don't carry packages or passengers that will interfere with your visibility or control of the Surrey.
- Don't use items that may restrict your hearing.
- Do not lock up the brakes. When braking, always apply the rear brake first, then the front. The front brake is more powerful and if it is not correctly applied, you may lose control and fall.
- Maintain a comfortable stopping distance from all other riders, vehicles and objects.
- Safe braking distances and forces are subject to the prevailing weather conditions.



VIII.

HELMETS, PROTECTIVE GEAR & CLOTHING

A WORD TO PARENTS REGARDING CHILDREN AND HELMETS:

Many states have passed helmet laws regarding children. Make sure you know your states helmet laws. It is your job to enforce these rules with your children. Even if your state does not have a children's helmet law, it is recommended that everyone wear a helmet when cycling. When riding with a child carrier seat or trailer, children must wear a helmet.

We strongly advise that a properly fitting ASTM or SNELL approved, Surrey safety helmet be worn at all times when riding your Surrey. In addition, if you are carrying a passenger in a child safety seat, they must also be wearing a helmet. The correct helmet should be fitted and worn in the manner described by the helmet manufacturer.

Many states require specific safety devices in addition to a helmet. It is your responsibility to familiarize yourself with the laws of the state where you are operating and riding and comply with all such laws, including properly equipping yourself and your cycle as the law and common sense requires.

We recommend that you not ride your Surrey at night. If you choose to ride at night, we strongly suggest you equipment your Surrey with industry standard bicycle safety lights on the front and rear of your Surrey. Also wear bright reflective clothing so that you are easily seen in dark conditions.

Be sure to understand the following common sense safeguards for operating your Surrey, to reduce the risk of personal injury. Parents of minor riders have an obligation to be sure their children understand these safeguards.

- Be sure you understand all the operations of your Surrey.
- Be sure all equipment is properly adjusted, especially your wheels, steering and brakes.
- Obey traffic laws. Cyclists are subject to the same rules as motorists. Know and obey all motor-vehicle, bicycle and traffic laws.
- Use common sense. Slow down for intersections. Do not erratically weave in and out of motor traffic. Watch for parked cars suddenly pulling out, or their doors opening.
- Avoid heavy motor traffic.
- Never carry more persons than your Surrey is designed to carry by the manufacturer.
- Make use of safety accessories and clothing. Wear bright or light colored clothing, or a vest with reflectors, especially at night. Wear shoes and a helmet.
- Always ride defensively. While you may be legally right, in a contest between an auto and your Surrey, the car will come out first.
- Be especially cautious with downhill braking. With very steep downgrades, it may be impossible to stop your Surrey in a necessary distance although the braking system meets the highest standards. To avoid possible injury, dismount and walk your Surrey (use the brakes) to the bottom of the grade, if you do not feel secure enough, especially on wet, muddy or gravel roads.
- Do not stunt ride. Do not use the Surrey for stunt or acrobatic riding, ramp jumping or similar activities.

Warning: Bad weather requires increased breaking distance. On the road with wet, snowy or icy weather conditions, your brakes cannot stop you as quickly as in clement weather conditions. Special precautions must be taken to ensure safe stopping or slowing, and reduce the risk of personal injury. No matter how well your brake system functions, it is your responsibility to exercise special care in such adverse situations. Ride slowly. Be more alert. Apply your brakes sooner than you would under dry conditions.

Warning: Special precautions for night riding. Be sure your Surrey has reflectors or lights required by law on wheels, pedals, front and back. Be sure reflectors are properly adjusted and clean. State or local laws may require that you equip your Surrey with a light system in addition to the reflectors. Wear special reflective clothing or tapes. Reflective clothing as well as tapes for sleeves, backs and pants are available at bicycle stores almost everywhere. Avoid cycling on dark, narrow roads. Never allow children to ride alone at night.

Initial checks on taking delivery

After assembly, carefully check all bolts related to steering, brakes and wheels, and if necessary, adjusted, by a cycle mechanic. Let a cycle mechanic also check and, if necessary, adjust the brakes and the tire pressures.

Have your Surrey serviced regularly

Your vehicle must be serviced by a trained cycle mechanic every 50 to 100 miles.

Take care getting on board

Do not place your feet on the steering rods, the chainguards or the fenders (mudguards). Front-seat passengers must be instructed to keep their feet clear of the steering rods. Should their feet interfere with these rods this may throw the tracking of the wheels out of alignment, and necessitate readjustment. **Make perfectly sure, too, that all passengers keep their feet on the pedals at all times when the vehicle is in motion. It is dangerous to remove feet from the pedals during riding.** If passengers are using the Surrey who are not able to hold their feet on the pedals, like handicapped persons, do care for fixing their shoes on the pedals before you start to ride. The front passengers have a relatively low seating position, such that a passenger might be tempted to put his or her feet on the ground. Should such a careless action take place at speed there will be the danger of an accident with physical injuries.

Dealing with centrifugal force when cornering!

Passengers riding a Surrey for the first time need time to get used to cornering. Start with slow cornering with a minimal slope, so that your passengers can sense how they should position themselves in a curve. If all passengers lean correctly into the curve the vehicle maintains a high level of stability and curving at speed can be great fun. But if they fail to lean correctly, the person steering can lose confidence and control, and can in fact lose control and, in the worst case, allow the vehicle to stray onto the other side of the road, possibly colliding with oncoming traffic. It is therefore very important that you pay particular attention to the behavior of your fellow passengers while cornering and give them clear instructions in this matter.

Where may I ride the Surrey?

The Surrey may generally ride anywhere a bicycle is legal to ride. So avoid hitting hard against roadside curbs. Avoid riding off well-surfaced roads. Avoid potholes. Avoid off-road routes and especially downhill off-road routes. Avoid routes involving going through water and/or exposure to sea salt. Avoid routes with untoward slopes or gradients where you might reach unsafe speeds or need to push the vehicle. You may use cycle paths where they are sufficiently wide, but show respect to other path users. Where cycle paths are not wide enough, you may ride on the road. Also show respect to motorists and let them overtake where possible. Discuss with your passengers before each journey the matter of who will be responsible for giving hand signals so that other road users are not confused by conflicting messages. Good communication is at the very heart of Surrey-riding.

Safety is everything! Ride sensibly!

On the Surrey the person steering bears direct responsibility for him/herself and all other passengers. Ride carefully, anticipating problems, and avoid sudden maneuvers such as unexpected fast turns and unnecessary sharp braking. Bear in mind that the front passengers may well quickly feel unsafe if you cause the Surrey to travel in an erratic fashion. You can best experience this for yourself if you swap places and ride at the front. The Surrey is a pedal cycle, but a very special one.



RULES FOR CHILDREN

To avoid accidents, teach children good riding skills with an emphasis on safety from an early age. Children should be supervised by an adult.

- Many states require that children wear a helmet while cycling. Always wear a properly fitted helmet.
- Do not play in driveways or the road.
- Do not ride on busy streets.
- Do not ride at night.
- Obey all the traffic laws, especially stop signs and red lights.
- Be aware of other road vehicles behind and nearby.
- Before entering a street: Stop, look left, right, and left again for traffic. If there's no traffic, proceed into the roadway.
- If riding downhill, be extra careful. Slow down using the brakes and maintain control of the steering.
- Never take your hands off the handlebars, or your feet off the pedals when riding downhill.
- The Consumer Protection Safety Commission advises that the riding of small wheel diameter bicycles at excessive speeds can lead to instability and is not recommended.
- Children should be made aware of all possible riding hazards and correct riding behavior before they take to the streets.
- Do not leave it up to trial and error.

ALWAYS WEAR A HELMET!

Helmets save lives.

Check helmet manufacturer instructions for proper helmet size and fit.

Wet Weather

- In wet weather you need to take extra care.
- Brake earlier, you will take a longer distance to stop.
- Decrease your riding speed, avoid sudden braking and take corners with additional caution.
- Be more visible on the road.
- Wear reflective clothing and use safety lights.
- Pot holes and slippery surfaces such as line markings and train tracks all become more hazardous when wet.

Night Riding



IT IS RECOMMENDED TO NOT RIDE AT NIGHT

Check your local laws regarding night riding; Many areas require the use of lights for night riding in addition to a full set of CPSC compatible reflectors. The manufacturer recommends you do not ride at night. However, if you do:

- Ensure bicycle is equipped with a full set of correctly positioned and clean reflectors.
- Use a properly functioning lighting set comprising of a white front lamp and a red rear lamp.
- If using battery powered lights, make sure batteries are well charged.
- Some rear lights available have a flashing mechanism which enhances visibility.
- Wear reflective and light colored clothing.
- Ride at night only if necessary. Slow down and use familiar roads with street lighting, if possible.

VII.

RIDING SAFETY

General Rules

- When riding obey the same road laws as all other road vehicles, including giving way to pedestrians, and stopping at red lights and stop signs. For further information, contact the Road Traffic Authority in your State.
- Ride predictably and in a straight line. Never ride against traffic.
- Use correct hand signals to indicate turning or stopping.
- Ride defensively. To other road users, you may be hard to see.
- Concentrate on the path ahead. Avoid pot holes, gravel, wet road markings, oil, curbs, speed bumps, drain grates and other obstacles.
- Cross train tracks at a 90 degree angle or walk your bicycle across.
- Expect the unexpected such as opening car doors or cars backing out of concealed driveways.
- Be extra careful at intersections and when preparing to pass other vehicles.
- Familiarize yourself with all the bicycle's features. Practice gear shifts, braking, and the use of toe clips and straps, if installed.
- If you are wearing loose pants, use leg clips or elastic bands to prevent them from being caught in the chain.
- Wear proper riding attire and avoid open toe shoes.
- Don't carry packages or passengers that will interfere with your visibility or control of the bicycle.
- Don't use items that may restrict your hearing.
- Do not lock up the brakes. When braking, always apply the rear brake first, then the front. The front brake is more powerful and if it is not correctly applied, you may lose control and fall.